

5179954



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D6104-011
Job Sheet 194502



Part No: D6104-011

Job Qty: 10 pcs

Part Name: 17-4 SS Roundbar 6.50"OD



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 5/3/19

Job Tracking No:

Due Date: 5/31/19

Created By: Kimberley Guerin

Type: Stock

Description:

Note: DWG REV B

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier	Sign-off
					Setup Hrs	Run Hrs		
100	Purchasing	10 pcs	5/31/19	5/31/19	0.00	0.00	Purchasing - 1	At 1905/09
							Purchasing - 2	
							Purchasing - 3	
110	Packaging 2-1 - Receive - B4B	10 pcs	5/31/19	5/31/19	0.00	0.00	Packaging 2 - 1 - B4B	At 1905/09
							Packaging 2 - 2 - B4B	
							Packaging 2 - 3 - B4B	
							Packaging 2 - 5 - B4B	
							Packaging 2 - 4 - B4B	
							Packaging 2 - 6 - B4B	
							Packaging 2 - 7 - B4B	
							Packaging 2 - 8 - B4B	
							Packaging 2 - 9 - B4B	
							Packaging 2 - 10 - B4B	
							Packaging 2 - 11 - B4B	
							Packaging 2 - 12 - B4B	
							Packaging 2 - 13 - B4B	
							Packaging 2 - 14 - B4B	
							Packaging 2 - 15 - B4B	
							Packaging 2 - 16 - B4B	
							Packaging 2 - 17 - B4B	
							Packaging 2 - 18 - B4B	
							Packaging 2 - 19 - B4B	
							Packaging 2 - 20 - B4B	
							Packaging 2 - 21 - B4B	
							Packaging 2 - 22 - B4B	
							Packaging 2 - 23 - B4B	
							Packaging 2 - 24 - B4B	
							Packaging 2 - 25 - B4B	
							Packaging 2 - 26 - B4B	
							Packaging 2 - 27 - B4B	
							Packaging 2 - 28 - B4B	

Plex 5/3/19 8:57 AM Dart.Guerin.Kimberley

				Packaging 2 - 29 - B4B	
				Packaging 2 - 30 - B4B	
				Packaging 2 - 31 - B4B	
				Packaging 2 - 32 - B4B	
				Packaging 2 - 33 - B4B	
				Packaging 2 - 34 - B4B	
				Packaging 2 - 35 - B4B	
				Packaging 2 - 36 - B4B	
120	QC 6	10 pcs	5/31/19	0.00 0.00	QC 6 - 9
					QC 6 - 68
					QC 6 - 61
					QC 6 - 40
130	Packaging 3-1 - Stock - B4B	10 pcs	5/31/19	0.00 0.00	Packaging 3 - 1 - B4B
					Packaging 3 - 2 - B4B
					Packaging 3 - 3 - B4B
					Packaging 3 - 4 - B4B
					Packaging 3 - 5 - B4B
					Packaging 3 - 6 - B4B
					Packaging 3 - 7 - B4B
					Packaging 3 - 8 - B4B
					Packaging 3 - 9 - B4B
					Packaging 3 - 10 - B4B
					Packaging 3 - 11 - B4B
					Packaging 3 - 12 - B4B
					Packaging 3 - 13 - B4B
					Packaging 3 - 14 - B4B
					Packaging 3 - 15 - B4B
					Packaging 3 - 16 - B4B
					Packaging 3 - 17 - B4B
					Packaging 3 - 18 - B4B
					Packaging 3 - 19 - B4B
					Packaging 3 - 20 - B4B
					Packaging 3 - 21 - B4B
					Packaging 3 - 22 - B4B
					Packaging 3 - 23 - B4B
					Packaging 3 - 24 - B4B
					Packaging 3 - 25 - B4B
					Packaging 3 - 26 - B4B
					Packaging 3 - 27 - B4B
					Packaging 3 - 28 - B4B
					Packaging 3 - 29 - B4B
					Packaging 3 - 30 - B4B
					Packaging 3 - 31 - B4B
					Packaging 3 - 32 - B4B
					Packaging 3 - 33 - B4B
					Packaging 3 - 34 - B4B
					Packaging 3 - 35 - B4B
					Packaging 3 - 36 - B4B
140	QC 21 - SA	10 pcs	5/31/19	0.00 0.00	QC 21 - SA - 21
					QC 21 - SA - 70
					QC 21 - SA - 53

DAS
61
9-89DAS
21

MAY 10 2019

Part Op 100 - (Purchasing) Issue P/O: _____ b) Ø6.50" x 4.100" long e) Min UTS = 170 KSI (38 HRc) Material
 Descriptions: certification required
 110 - (Receive & Inspect for Damage & Mat'l Certs) Ensure material certification is attached
 120 - (QC6- All purchased or subcontracted products) Ensure Material certification comply to Dwg D6104
 130 - (Identify as per dwg & Stock Location: _____) LOCATION: MAT043
 140 - (QC21- Final Inspection - Work Order Release)

Job BOM				
Part / Item	Component Name	Quantity	Operation	Container
D6104-011P	17-4 SS Roundbar 6.50"OD	10 pcs (1 ea)	100-Purchasing	S179946
Job Allocations				
Operation	Component Part	Required	Inventory	Allocated
100-Purchasing	D6104-011P	10	0	0
Part Specifications				
Specifications could not be found.				

Plex 5/3/19 8:57 AM Dart.Guerin.Kimberley

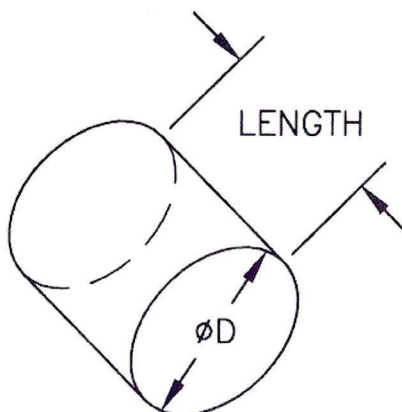
DART

DESIGN RT	DRAWN BY 	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED 	APPROVED 	DRAWING NO. D6104	Rev. B SHEET 1 OF 1
DATE 02.11.25		TITLE ROUND BILLET, 17-4	SCALE NTS
A	01.04.10	NEW ISSUE	
B	02.11.25	CLARIFY ALLOY SPEC ADDED D6104-009/-011 REDUCE LENGTH OF BILLETS	

RELEASED

02.11.29

SPECIFICATION CONTROL DRAWING

MATERIAL: 17-4 PH SS (AMS 5643) ^{VM} OR AISI 630) MIN UTS = 170 KSI (38 HRC)

PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, DIAMETER x LENGTH (+0.030/-0.000) AS SHOWN.

TOLERANCE ON ALL DIMENSIONS IS +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES

Part No.	Alloy	D (Diameter)	Length
D6104-001	17-4 PH STAINLESS STEEL	Ø3.00	3.80
D6104-003	17-4 PH STAINLESS STEEL	Ø3.25	3.80
D6104-005	17-4 PH STAINLESS STEEL	Ø4.00	5.10
D6104-007	17-4 PH STAINLESS STEEL	Ø4.50	5.10
D6104-009	17-4 PH STAINLESS STEEL	Ø5.25	4.10
D6104-011	17-4 PH STAINLESS STEEL (630)	Ø6.50	4.10

Copyright © 2001 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB043369



Supplier: MEC002-VU
Metaux Castle
P.O. Box 4090 Stn A
Toronto
ON
M5W OE9 Canada

PO No: POHB043369

PO Date: 5/3/19

Due Date: 5/24/19

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Phone:

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground

Pymt Terms: Net 60

Freight Terms:

Special Comments:

E-MAILED
2019-05-03

Items

Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
1	194485	D6101-001P	72746	7075-T7351 2X6X6.25 : Various STC's AS PER DWG D6101 REV. B SIZE: 6.00" X 6.250" X 2.00" THICK GRAIN DIRECTION ALONG 6.00" LENGHT MATERIAL: 7075- T7351 QQ-A-250/12 TOLERANCE AS PER QUOTE +.030"/-.000"	Firmed	-	5/24/19	20 pcs	0 pcs	20 pcs	\$29.57/pcs	\$591.40
2	194489	D6101-003P	72742	7075-T7351 2X6.25X7.875 : Various STC's AS PER DWG D6101 REV. B SIZE: 7.875" X 6.250" X 2.00" THICK GRAIN DIRECTION ALONG 7.875" LENGHT MATERIAL: 7075- T7351 QQ-A-250/12 TOLERANCE AS PER QUOTE +.030"/-.000"	Firmed	-	5/24/19	20 pcs	0 pcs	20 pcs	\$38.82/pcs	\$776.40



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB043369



Items												
Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
3	194493	D6101-005P	72744	7075-T7351 8.25X5.0X2.5 : Various STC's AS PER DWG.D6101 REV.B SIZE: 5.00" X 8.250" X 2.50" THICK GRAIN DIRECTION ALONG 5.00" LENGHT MATERIAL: 7075- T7351 QQ-A-250/12 TOLERANCE AS PER QUOTE +.030"/-.000"	Firmed	-	5/24/19	20 pcs	0 pcs	20 pcs	\$40.54/pcs	\$810.80
4	194498	D6101-007P	72743	7075-T7351 8.25X7.75X2.5 : Various STC's AS PER DWG D6101 REV. B MATERIAL: 7075- T7351 (QQ-A- 250/12) SIZE: 7.750" X 8.250" X 2.50" THICK GRAIN DIRECTION ALONG: 7.750" LENGTH TOLERANCE AS PER QUOTE +.030"/-.000"	Firmed	-	5/24/19	40 pcs	0 pcs	40 pcs	\$61.72/pcs	\$2,468.80
5	194499	D6103-003P		Round Alum Billet : Various STC's AS PER DWG D6103 REV. B MATERIAL: 7075- T7351 AS PER QQ- A-225/9 SIZE: 3.500" X 12.500" LONG	Firmed	-	5/24/19	10 pcs	0 pcs	10 pcs	\$60.40/pcs	\$604.00
6	194502	D6104-011P		17-4 SS Roundbar 6.50"OD : Various STC's	Firmed	-	5/24/19	10 pcs	10 pcs	10 pcs	\$128.20/pcs	\$1,282.00
Grand Total:												\$6,533.40

MAY 09 2019



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB043369



Order Notes

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Procurement Quality Clauses

A005 RIGHT OF ENTRY
A007 FIRST ARTICLE INSPECTION (FAI) BY SELLER, (DOCUMENTATION MAINTAINED BY SUPPLIER)
A012 CHEMICAL AND PHYSICAL TEST REPORTS
A016 PERSONNEL QUALIFICATION
A017 RAW MATERIAL IDENTIFICATION (AS APPLICABLE)
A026 CERTIFICATION OF MATERIAL CONFORMANCE
A041 QUALITY MANAGEMENT SYSTEM
A042 DART NOTIFICATION BY SUPPLIER
A043 RETENTION OF QUALITY DOCUMENT

A048 COUNTERFEIT PARTS AVOIDANCE, DETECTION, MITIGATION AND DISPOSITION PROGRAM
A049 SUPPLIER AWARENESS

CL
KLL

Plex 5/3/19 11:26 AM Dart.Guerin.Kimberley

**Castle Metals®**

A. M. Castle & Co.

PACKING SLIP/
CERTIFICATE OF CONFORMANCE

Page 1 of 2

Shipment No:3897795

Ship From: A. M. CASTLE & CO. 2150 ARGENTIA ROAD MISSISSAUGA, ON L5N 2K7 CAN		Sold To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA		Ship To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CAN		Deliver To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	
Date Shipped 08-MAY-19	F.O.B. ORIGIN	Freight Terms Prepaid		Carrier LOCAL FLEET		BOL No 3897795-3	

Shipment Details	Final Destination Branch - TOR
-------------------------	---------------------------------------

Order No	Line No	Item No	Description				
5479669	2	15003.MO	6.5000.RD.17CR-4NI.STAINLESS.RT.SOL TR.COND A.120.0000-168.0000 CUT TO 4.1 IN (+ .2500/- .0000 IN) - BAND SAW CUTTING SPECIFICATIONS: AMS 5643				
Purchase Order No		Part Number	Ordered Qty		Invoice Qty		
POHB043369		YOUR ITEM NUMBER: D6104-011	10.00 PCS		10.00 PCS		
Details		ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #'S Email P/s and certs to: clavoie@dartaero.com END USER: DART AEROSPACE END USE: COMMERCIAL AIRCRAFT PARTS					
Delivery No.	Mill/Source	Heat Number	Mech Id	PCS	Width (IN)	Length (IN)	Shipped Qty(LBS)
122680842	VALBRUNA CORPORATION	 275552		10			400.4532

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.

Date Printed: 08-MAY-2019 02:58:55 PM



Castle Metals®

A. M. Castle & Co.

PACKING SLIP/
CERTIFICATE OF CONFORMANCE

Page 2 of 2

Reviewed by Authorized Castle Metals Representative:

MAY 08 2019

Date:

Name:

Skalaw



**VALBRUNA**SLATER STAINLESS, INC.
2400 TAYLOR STREET WEST - PO BOX 630
FORT WAYNE IN 46802 USA
PHONE 260.434.2800 - FAX 260.434.2601**Product Certification Report**Report Number: **5515871**

Certified on Jun 26, 2018 Page 1 of 2

Order I.D. OA18001198 0010		Order Date 2/26/18		Commodity Code	
Dim 1 6.5000	Dim 2 .0000	Heat I.D. 275552	Customer I.D. 0008000033	Customer Purchase Order 40524	
Product Shape Round		Product Surface HR and Rough Turned		Customer Grade 630	
Length (Inches) 120.000 Min. 168.000 Max.		Bill of Lading # PL18002886/1		Weight 003169 LBS	

Ship To
VALBRUNA CANADA LTD
8724 HOLGATE CRESCENT
MILTON, ONTARIO, L9T 5Z1



Sold To
VALBRUNA CANADA LTD
8724 HOLGATE CRESCENT
MILTON, ONTARIO, NN L9T 5Z1

Lifts: 0020

ASME SA564-13

AISI 630

ASTM A484-18

Condition A

*3174-02 REV 40

EN 10204 3.1

ASTM A564-13e1

ASTM A370-17

ASTM A564-13e1 TYPE 630

AMS 5643V Vm

CHEMICAL ANALYSIS

C	Mn	P	S	Si	Cr	Ni	Mo	Cu	N	Cb	Ta	Cb+Ta
.04	.56	.025	.003	.32	15.19	4.59	.19	3.34	.04	.25	.003	.25

BRINELL Type A device E10-15a

HBW

357

ROOM TEMP TENSILE ASTM E8-16a

CAPABILITY

Cap HB	TS (PSI)	.2%YS (PSI)	%EL(4d)	%RA	AGE(F)
403	197000	174000	13.8	49.0	900

MAGNETIC PARTICLE to AMS2303F

FREQ SEV

AVG .03 .03

PRODUCTION HEAT TREATMENT

SOL-ANN(F)	SOL-ANN(HR)	QUENCH
1900	9.00	Air

MACRO ASTM E340-15/E381-01(12)

MACRO

OK

GRAIN SIZE ASTM E112-13

GRAIN SIZE	Etchant	Magnification X
5	Marbles	100

PERCENT FERRITE (AMS 2315G)

% FERRITE	Etchant	Magnification X
.2	Marbles	100

Reduction ratio 5 To 1 Min.

Electric Furnace melted; AOD refined.

Ultrasonic tested to ASTM A388- Satisfactory.

*Certification revised at Valbruna by T. Landwehr (7/17/18)

Results relate only to the items tested. Certification shall not be reproduced except in full, without written approval of Valbruna Stainless Inc. The recording of false, fictitious, or fraudulent statements on this document may be punished as a felony under federal statutes. Including Federal law Title 18, Chapter 47. Consult material safety data sheet (MSDS) for hazard info.

I hereby certify that the reported figures are correct as contained in the records of the corporation.

Manager Laboratory Services

email TLandwehr@valbruna.us

Tad Landwehr

**VALBRUNA**SLATER STAINLESS, INC.
2400 TAYLOR STREET WEST - PO BOX 630
FORT WAYNE IN 46802 USA
PHONE 260.434.2800 - FAX 260.434.2801**Product Certification Report**Report Number: **5515871**

Certified on Jun 26, 2018 Page 2 of 2

Order I.D. OA18001198 0010	Order Date 2/26/18	Commodity Code	
Dim 1 6.5000	Dim 2 .0000	Heat I.D. 275552	Customer I.D. 0008000033
Product Shape Round		Product Surface HR and Rough Turned	Customer Purchase Order 40524
Product Grade 630		Customer Grade 630	
Length (Inches) 120.000 Min. 168.000 Max.		Bill of Lading # PL18002886/1	Weight 003169 LBS

Ship To
VALBRUNA CANADA LTD
8724 HOLGATE CRESCENT
MILTON, ONTARIO, L9T 5Z1

Sold To
VALBRUNA CANADA LTD
8724 HOLGATE CRESCENT
MILTON, ONTARIO, NN L9T 5Z1

Chemical testing to one or more of the listed ASTM methods:

E1019-11, E1086-14.

Location of tensile fracture: inside middle of gage length. %elong after fracture.

Chemical Analysis performed at Acciaierie Valbruna, Italy.

No mercury or low melting alloy contamination. No weld repair.

Material melted in Italy, manufactured in the United States.

Material conforms to listed specifications. DFARS compliant. Our heat treat furnaces use air atmosphere.

Quality system is compliant with ISO 9001:2015. Produced in accordance with EN 10204 3.1.

Results relate only to the items tested. Certification shall not be reproduced except in full, without written approval of Valbruna Stainless Inc. The recording of false, fictitious, or fraudulent statements on this document may be punished as a felony under federal statutes. Including Federal law Title 18, Chapter 47. Consult material safety data sheet (MSDS) for hazard info. I hereby certify that the reported figures are correct as contained in the records of the corporation.

Manager Laboratory Services

email: TLandwehr@valbruna.us

Tad Landwehr

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: D6104-011
 DATE: May 9th 2019

PO / BATCH NO.: POH13043369/S179954

MATERIAL CERT REC'D: yes
 QUANTITY RECEIVED: 10x
 QUANTITY INSPECTED: 10x
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 6.50"
 THICKNESS RECEIVED: 6.50"
 SHEET SIZE ORDERED: -
 SHEET SIZE RECEIVED: -

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y ☒ N ☐	
CORRECT FINISH	Y ☒ N ☐	
CORROSION	Y ☒ N ☐	
CORRECT GRAIN DIRECTION	Y ☒ N ☐	
CORRECT MATERIAL PER M-DRAWING	Y ☒ N ☐	<u>Ams 5643</u>
CORRECT THICKNESS	Y ☒ N ☐	
PHOTO REQUIRED	Y ☒ N ☐	
CORRECT REF # TO LINK CERT	Y ☒ N ☐	<u>275552</u>
CORRECT MATERIAL IDENTIFICATION	Y ☒ N ☐	
CORRECT M# ON THE MATERIAL	Y ☒ N ☐	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y ☐ N ☒	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y ☐ N ☒	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>UM</u> DATE: <u>MAY 09 2019</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in